Natural Gas Star Program

2010 Annual Report Calculations

Project:	Year Completed	Methane Reduction Calculation:						
Cherry Creek A/F Ratio & Cat Conv. Install #1	2001	758	MCF/Compressor/Year	1	Compressor	=	758	MCF
Antelope Station #1 Engine Shutdowns	2002	2.11	MCF/Horsepower/Year	990	Horsepower	=	2,089	MCF
Antelope Station #2 Engine Shutdowns	2003	2.11	MCF/Horsepower/Year	1980	Horsepower	=	4,178	MCF
Tioga Plant Engine P36A Electric Drive Install	2004	2.11	MCF/Horsepower/Year	64	Horsepower	=	135	MCF
Seminole H2O Pumps Electric Drive Installs (7)	2004	2.11	MCF/Horsepower/Year	7280	Horsepower	=	15,361	MCF
Tioga Plant Supr. Engine Electric Drive Install	2005	2.11	MCF/Horsepower/Year	2650	Horsepower	=	5,592	MCF
Tioga Plant Engine P36B Electric Drive Install	2005	2.11	MCF/Horsepower/Year	64	Horsepower	=	135	MCF
Tioga Plant Engine P47 Electric Drive Install	2005	2.11	MCF/Horsepower/Year	82	Horsepower	=	173	MCF
BLDU H2O Pumps Electric Drive Installs (3)	2005	2.11	MCF/Horsepower/Year	675	Horsepower	=	1,424	MCF
Seminole H2O Pumps Electric Drive Installs (3)	2005	2.11	MCF/Horsepower/Year	3120	Horsepower	=	6,583	MCF
Cherry Creek A/F Ratio & Cat Conv. Install #2	2006	758	MCF/Compressor/Year	1	Compressor	=	758	MCF
Blue Buttes A/F Ratio & Cat Conv. Install	2007	758	MCF/Compressor/Year	1	Compressor	=	758	MCF
Tioga Plant Catp. Engine Electric Drive Install	2007	2.11	MCF/Horsepower/Year	3550	Horsepower	=	7,491	MCF
BLDU H2O Pumps Electric Drive Installs (4)	2007	2.11	MCF/Horsepower/Year	900	Horsepower	=	1,899	MCF
Cherry Creek Wauk. Engine Electric Drive Install	2008	2.11	MCF/Horsepower/Year	328	Horsepower	=	692	MCF
VRU Installations On Tioga Bakken Oil Tanks	2010		Calculations Attached				18,400	MCF
						TOTAL	**= 66,425**	**MCF**

I hereby certify the accuracy of the data contained in this report: Michael D. Ford 4/28/11
Date

Methane reduction calculations based on Natural Gas Star factors.

Only projects less than 10 years old considered due to "sunset" restrictions.

Total value of gas saved at $7/MCF (default value) = $430,535.

Bakken Methane Reduction Calculation

2010 VRU Installation

2010 Natural Gas Star Reporting Program

Calculation Factors:

2009 Tioga Bakken VOC Emissions From Flash Gas = 10,154 Tons

2010 Tioga Bakken VOC Emissions From Flash Gas = 5,075 Tons

VOC Weight % In Bakken Flash Gas = 73.39 (Based On Gas Sampling)

Methane Weight % In Bakken Flash Gas = 5.62 (Based On Gas Sampling)

23.65 SCF Of Methane = 1 Pound Of Methane

Methane Reduction Calculations:

10,154 – 5,075 = 5,079 tons of VOC reduced

$$\frac{5{,}079 \text{ tons}}{73.39 \text{ Weight \%}} = \frac{X \text{ tons}}{5.62 \text{ Weight \%}}$$

X = 389 tons of methane reduced

(389 tons) (2000 pounds/1 ton) = 778,000 pounds of methane

(778,000 pounds) (23.65 SCF/1 pound) = 18,399,700 SCF of methane, or 18,399.7 MCF